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GOVERNMENT OF THE DISTRICT OF COLUMBIA
OFFICE OF THE CHIEF TECHNOLOGY OFFICER



September 13, 2001

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Magalie Roman Salas, Commission Secretary,
Federal Communication Commission
Wireless Telecommunications Bureau
Commercial Wireless Division – Policy and Rules Branch
445 12th Street S.W. TW-B204
Washington, D.C. 20554

Ref: Docket No. 01-192 - Pacific Wireless Technologies and Nextel Communication
Application and Docket No. 01-193 Chadmoore Wireless Group and
Nextel Communications requests for license transfers.

Dear Ms. Salas,

On behalf of the Government of the District of Columbia, the undersigned oppose approval of additional frequencies for the above applicants. These organizations have been operating in the District of Columbia and specifically Nextel Communications has caused (and we believe is still causing) harmful interference, affecting our 800 MHz fire and emergency medical service (FEMS) radio system. We oppose the allocation of additional licenses to Nextel¹ in order to protect and enhance the District's public safety communications system. This request aligns with the FCC's duty to ensure that its licensing process promotes public safety, convenience, interest and necessity.

We request the FCC to forebear allocation of any additional frequencies to Nextel until the FCC is certain that (a) the complaint lodged by the District with the FCC Enforcement Bureau is resolved consistent with the District's public safety needs, (b) the District Government has resolved all potential and existing interference problems, and (c) the District Government has approved a documented regime to prevent known or potential problems of interference caused by Nextel's transmission on any frequencies currently licensed to Nextel, or being considered for licensure to Nextel.

¹ For convenience and streamlining, this letter will focus on Nextel, but the reader should note that, while Nextel is the predominant carrier of concern, all of the matters raised in this letter are applicable to any carrier transmitting in the current interleaved frequency assignment environment. Therefore, unless the context requires otherwise, when this letter refers to "Nextel", the reader may read "Nextel and other relevant carriers".

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Alternatively, if the above bases for forbearance prove unworkable for any reason, we request that the FCC forbear approving allocation of any new frequencies to Nextel until the FCC completes a rulemaking designed to protect public safety systems. We recommend that the rulemaking have substantially the same effect as the attached document marked "Exhibit A". Please be advised that we will also follow appropriate protocol for lodging of rule-making requests mentioned or referenced herein.

The District of Columbia Fire and Emergency Medical Services agency has the unique responsibility of protecting the nation's capital, with a mission that is far more complex than any other city in the United States. With this mission in mind, the District has spent approximately 10 million dollars in the past several years to upgrade the fire and emergency medical services radio communications system to a new 800 MHz trunked radio system. This new critical communications system began operation within the past year, and is therefore the best available technology in terms of dealing with noise and interference. The radio system has experienced past and continuing coverage problems throughout the city. Part of the problem has been interference caused by the Nextel Communication System, as indicated by the attached historical record of problems and corrections. We know of no other source for residual problems, other than Nextel.

Nextel has cooperated with the District Government in uncovering and correcting selected problems, but we continue to experience residual interference. Our research and experimentation have not uncovered any party other than Nextel as a potential source of the residual interference. There remains much work to be done, which would be further complicated by the FCC's approval of additional frequencies for Nextel.

The District has investigated the cause of the interference with our radio system during the past several months and we have conducted testing to discover the cause of this interference. However, because (i) the design of the Nextel system allows for constantly changing frequencies, (ii) Nextel's transmission equipment is co-located on sites with numerous transmitters in a single location, and (iii) we do not have access to Nextel's system for the purpose of continual monitoring and experimentation, the exact source(s) of the problem is/are difficult to locate. The District has opened a complaint with the FCC Enforcement Bureau and is awaiting findings from this investigation. Certainly, as a threshold matter, the FCC should not consider approval of any additional frequencies for Nextel until due process is fulfilled for the complaint already lodged by the District government.

The District is aware that this interference is a nationwide problem, and that the Nextel frequencies appear to have been legally obtained through proper FCC licensing processes. However, Nextel's communication system has caused harmful interference to our public safety system. We are also aware that other public safety agencies throughout the US have reported similar problems, and that Nextel has admitted responsibility for at

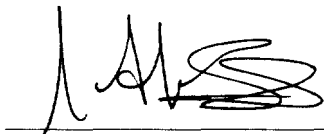
least some of these problems. The safety of our public safety personnel and the public is at stake. Haste to facilitate Nextel's commercial considerations (even if important to consumer services) should not override the importance of this matter.

Until an acceptable and affordable solution is provided to our public safety agencies, we will oppose any transfer or new licensing of frequencies to Nextel, or other companies that may cause interference with our public safety radio systems.

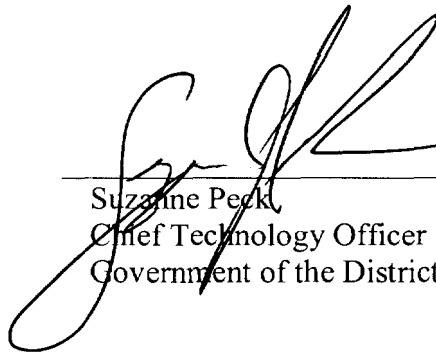
We would welcome an opportunity to discuss this matter more fully with you and Nextel. We are not interested in negatively affecting Nextel, and we welcome the opportunity to continue to work with Nextel to arrive at a mutually acceptable solution. We need a solution that will protect our staff and the public.

The attached document, marked "Exhibit A" and entitled "Draft Proposed Action Plan to Correct and Mitigate Interference Caused by Wireless Carriers to the Public Safety Radio System of the Government of the District of Columbia" sets out steps that we require or propose be taken in an ongoing cooperative program between the Government of the District of Columbia, Nextel, any other relevant carrier or party, and an independent science and engineering representative (such as NTIA).

Sincerely,



Margret Kellems
Deputy Mayor for Public Safety
Government of the District of Columbia



Suzanne Peck
Chief Technology Officer
Government of the District of Columbia

Attachments:

1. Selected Case Report Records of Historical Problems Caused by Nextel's System (5 pages)
2. Draft Proposed Action Plan to Correct and Mitigate Interference Caused by Wireless Carriers to the Public Safety Radio System of the Government of the District of Columbia (3 pages)

Selected Case Report Records of Historical Problems Caused by Nextel's System

(5 pages follow)

EB RAMS Case Management

#Name?

CASE REPORT EB-01-CF-364

47.2 HRS Spent on 30N09

Utility Field:

☐ Safety ☐ Confidential ☐ Congressional ☐ Unlicensed Source:

Suspense Date

Status

CLOSED

Start Date 7/19/01	Office CF	HQ#	Local#	Logged by JGW
COMPLAINANT			SUBJECT	
Name WINDELL GIGGY				
Company DC FIRE DEPT			NEXTEL	
Address 300 McMillan Dr.				
City Washington DC				
Pri Phone (202) 673-3165 Fax (202) 673-3304			Pri Phone Fax	
Alt Phone cell-202 3025281			Alt Phone	
Call Sign Freq MHz			Call Sign Freq MHz	
Xmtr City State Twr#			Lat Long	
Activity Enforcement - Interference Resolution ActCode 30N09			Rule Part 90B	
Project Land Mobile Public Safety Shared			Action Plan Involved Public Safety	

GENERAL CASE DESCRIPTION

<input type="checkbox"/> Information Transfer	<input checked="" type="checkbox"/> Investigation	<input type="checkbox"/> HFDF Bearing	<input type="checkbox"/> Unlicensed
<input checked="" type="checkbox"/> Comm Prob Resolution	<input type="checkbox"/> Inspection	<input checked="" type="checkbox"/> Inquiry/Complaint	<input type="checkbox"/> Safety

C-Alt Contact

C-Alt Call or ID

S-Contacts

Tower Owner

Other Site Info:

Problem 800 MHz trunked system reports "illegal carrier", on multiple channels, multiple sites

Description:

RULE VIOLATIONS**WORK EVENTS**

Event Date	Agent	Event Type	IN	OUT	Travel Cost	Problem Resolution
7/19/2001	JGW	OPEN	1.0	1.0		DES, DWB and JGW met with Giggey to discuss problem and review error log
8/1/2001	JGW	UPDATE	1.0			Giggey called. 38 page report from last weekend shows significant problem on channel 14 (813.9875 MHz) at St. Elizabeth site. We will meet Giggey and Motorola Rep on 8/9/01 to observe spectrum and attempt to locate problem.
8/9/2001	JGW	ON SCENE		8.0		DES & JGW on-scene. With SpecAn connected to spare port on Fire Dept combiner we noted drifting signal near 815.94. Later near Boling AFB similar signal was noted in vehicle near 816.01 MHz. Dfd to area around 23 and Constitution, WN.

1075

EB RAMS Case Management

#Name?

CASE REPORT EB-01-CF-364

8/10/2001	JGW	ON SCENE	8.0	DES & JGW Dfcd signal to Theodore Roosevelt Federal Bldg, 1900 E St NW, Washington DC. We met with John Statz, Building Manager, (202)606-2927 and took additional bearings from roof top using SpecAn and cavity-back spiral antenna. Source of signal appears to be southerly facing sector of NEXTEL antennas. Mr. Statz will provide contact info for NEXTEL on Monday.
8/13/2001	JGW	UPDATE	4.0	I made several calls attempting to locate right people with NEXTEL. Finally reached Mike Cagne at (410) 953-7566. He will have someone check into the problem. Giggey called to say that channel 16 (815.9875 MHz) had significant problems at St. Elizabeth over the weekend.
8/14/2001	JGW	UPDATE	1.0	Cagne left message stating that they didn't see any problem. I called him back and made arrangements to meet the NEXTEL technician on 8/16/01.
8/16/2001	JGW	ON SCENE	6.0	DES and JGW on-scene. We met with Abul, (703) 906-1936 and observed that signal was still present but had moved in frequency. DF from roof of penthouse still points toward NEXTEL's southeast sector antennas but signal level is not there. Finally located approximately 15" omni antenna at back of air conditioning unit on the main roof directly below NEXTEL's antenna. We traced cable to a bi-directional amplifier in a utility closet, room # 7H14. The unit is an Elisra, model MW-CBDA-SMRT-W60, FCC ID # OIW CBDAESMR1W60. The unit belongs to OMB, who occupies the building. It was installed by, and is serviced by, NEXTEL. Today's technicians were not aware of the amplifier. The unit is to be turned off at close of business today and NEXTEL's Bidirectional amplifier team, in Richmond today, will replace it before the start of business tomorrow.

285

EB RAMS Case Management

Run Date: 9/10/2001

CASE REPORT EB-01-CF-121

5 HRS Spent on 30N01

Utility Field: 2QIXST

Suspense Date

☐ Safety ☐ Confidential ☐ Congressional ☐ Unlicensed Source: LOCAL/PHON Status CLOSED

Start Date 3/22/01 Office CF HQ# Local# Logged by DES

COMPLAINANT				SUBJECT			
Name CHIEF GIGGEY							
Company FIRE DEPARTMENT				AT&T WIRELESS			
Address							
City Washington DC							
Pri Phone (301) 420-3361 Fax				Pri Phone Fax			
Alt Phone				Alt Phone			
Call Sign Freq 855.2125 MHz				Call Sign Freq 855.1625 MHz			
Xmtr City State Twr# Lat Long							
Activity Enforcement - Interference Resolution ActCode 30N01				Rule Part 90B			
Project Public Safety Land Mobile Exclusive				Action Plan Involved Public Safety			

GENERAL CASE DESCRIPTION

☐ Information Transfer ☒ Investigation ☐ HFDF Bearing ☐ Unlicensed
☒ Comm Prob Resolution ☐ Inspection ☒ Inquiry/Complaint ☐ Safety

C-Alt Contact

C-Alt Call or ID

S-Contacts

Tower Owner

Other Site Info:

Problem IX to one of the the Fire Department's trunk channels from frequency 50 KHz away that may belong to
Description: AT&T.

RULE VIOLATIONS

WORK EVENTS

Event Date	Agent	Event Type	IN	OUT	Travel Cost	Problem Resolution
3/22/2001	DES	OPEN		0.5		Chief Giggey from the DC Fire Dept. called to complain of IX from on their frequency of 855.2125 from a spurious emission off of 855.1625 that they have DF'ed to the AT&T building at 725 13th st NW. Chief Giggey said that the AT&T signal is 30-40 KHz wide. His number is 301-420-3361(Home) and 202-302-5281 cellular. He refered me to his radio tech Jay Kotler with Wireless Communications for the details. His numbers are 202-359-9969(cellular) and 1-866-293-9785 pager. I called Jay and got the details. He is seeing a spurious carrier off the 855.1625 MHz frequency that he thinks is coming from a broadband amp used by AT&T Wireless cellular system.

Page 1 of 2

Page 2 of 2

385

EB RAMS Case Management

Run Date: 9/10/2001

CASE REPORT EB-00-CF-559

9.7 HRS Spent on 30N01

Utility Field: 1qixsk

☒ Safety ☐ Confidential ☐ Congressional ☐ Unlicensed Source: CCMC

Suspense Date

Status CLOSED

Start Date 10/16/00 Office CF HQ# Local# Logged by DC

COMPLAINANT				SUBJECT			
Name CHIEF GIGGY							
Company DC FIRE DEPT							
Address 300 mcmillan drive nw							
City wash		DC 20001					
Pri Phone (202) 673-3260		Fax		Pri Phone		Fax	
Alt Phone 202-714-1231				Alt Phone			
Call Sign KNJA381		Freq 852.7375 MHz		Call Sign		Freq MHz	
Xmtr City		State		Twr#		Lat Long	

Activity Enforcement - Interference Resolution ActCode 30N01

Rule Part 90B

Project Land Mobile Public Safety Exclusive

Action Plan Involved Public Safety

GENERAL CASE DESCRIPTION

- ☐ Information Transfer ☒ Investigation ☐ HFDF Bearing ☐ Unlicensed
☐ Comm Prob Resolution ☐ Inspection ☒ Inquiry/Complaint ☒ Safety

C-Alt Contact

C-Alt Call or ID

S-Contacts

Tower Owner

Other Site Info:

Problem ix to fire channel says it sounds like other voices on the edge of the fire channel

Description:

RULE VIOLATIONS

WORK EVENTS

Event Date	Agent	Event Type	IN	OUT	Travel Cost	Problem Resolution
10/16/2000	DC	OPEN	0.1			will check out when in dc area this week
10/17/2000	DC	UPDATE	0.2	1.0		agents caine and walker monitored for sig while in mddf in the dc area but nll heard. Called chief giggy and he said sig was not active today but had been active for about a week before he was hearing it 5/5 at the 300 mcmillan drive nw site off of a 25ft tower. He will call when it is active again.
10/20/2000	DC	UPDATE	0.1	3.0		chief giggy called and said ix was active agent caine using mddf on scene ix probably due to overload observed within a few blocks of tower at peabody and georgia ave towers could not confirm signal belongs to nextel which has five freqs in 852 band: 852.1125, 852.1375, 852.1875, 852.2875, and 852.4125.

485

EB RAMS Case Management

Run Date: 9/10/2001

CASE REPORT EB-00-CF-559

10/23/2000	DC	UPDATE	0.1		talked with chief giggy who said he has been working with nextel and that he will call when ix is active again so we can try and confirm overload or intermod ix
10/25/2000	DC	UPDATE	0.1	2.0	giggy called this am said sig was active agents came and walker on scene approx 11am however sig was not active talked with giggy at control point and arranged to be on scene early Friday 10/27/00 while sig is still active because it appears signal is not active after approx 10am
10/27/2000	DC	CLOSED	0.1	3.0	met with giggy and jay from motorola at peabody site and determined what giggy was hearing through his monitor which was not in the system was cellphone calls that were not really getting into the system. Jay programmed hand held and put it on the same antenna and nothing was heard. Giggy now satisfied that the system is working properly and that there is no interference.
Totals Hours / Travel -			0.7	9.0	\$0.00

575

Draft Proposed Action Plan to Correct and Mitigate Interference Caused by Wireless Carriers to the Public Safety Radio System of the Government of the District of Columbia

The interference mitigation strategies listed below are based on acceptance of the following principles regarding interference caused by Nextel (and possibly others) to the District Government's public safety radio system:

1. Noise Floor/Interleaved Frequencies: Broadcasting by wireless carriers (especially in an interleaved frequency allocation environment) raises the noise floor, effectively resulting in less system capacity for the District.
2. Out-of-band Emissions: Out-of-band emission from wireless carriers' systems, even if it complies with FCC requirements, cumulatively worsens the above noise floor problem.
3. "Open Book" Participation: Analysis of the impact of the Nextel system on the public safety communications system even a few hours after the fact is unlikely to be helpful in trouble-shooting, because the Nextel system is continuously adjusted to suit traffic patterns and customer needs. Data must be gathered continuously, so that relevant contemporaneous information is available. It is therefore impractical (and probably in fact, impossible) to engage in effective problem-solving and long-term, reliable problem avoidance, unless all affected parties openly share all relevant technical and other information, on a continuing basis. This will require Nextel to allow District Government representatives (or an approved third party) into Nextel's facilities to continuously collect data and correlate system status and settings to problems as and when they are discovered.

Several of the following items are derived from the "Best Practices Guide" developed by APCO and others (including Nextel):

Recommended Tactics:

1. Dynamic System Analysis and Incremental Error Correction:
 - (a) The Government of the District of Columbia (DC) will place personnel (this could be personnel from NTIA, or selected by NTIA for this purpose) in Nextel's facilities in the District of Columbia and surrounding areas, to perform the following upfront tasks:
 - i) Inventory Nextel's system, including equipment characteristics, tower locations and characteristics, capacities, transmission power ranges (implemented and available), channel assignments including dynamic reassignments, filtration equipment and practices, out-of-band emission standards and associated side-band noise, noise floor measurements, operating procedures such as periodic re-tuning, maintenance and trouble-shooting, etc.
 - ii) Set up monitoring and measurement equipment, configured to log system characteristics and actions taken, all tied to a universal system clock.
 - (b) DC will continue and expand its coverage study and mapping, including an increased focus on areas and times that are most likely to be affected by Nextel's

**Draft Proposed Action Plan to Correct and Mitigate Interference
Caused by Wireless Carriers to the Public Safety Radio System
of the Government of the District of Columbia**

system. We will load this into our GIS mapping system and classify/prioritize the actions required to resolve issues discovered.

- (c) DC will correlate any known and newly discovered coverage issues with Nextel's system and its time-stamped operational characteristics and settings. DC will then select from one or more of the following solutions to correct problems uncovered:
 - i) Re-tune channels.
 - ii) Modify transmission power levels or antennae characteristics.
 - iii) Improve signal strength of public safety communications systems by one or more of:
 - (1) Adding base stations,
 - (2) Increasing power of existing stations,
 - (3) Improving antennae, and/or
 - (4) Upgrading mobile and handheld equipment.
 - iv) Improve filtration at the Nextel transmission sites, designed to reduce side-band noise outside of licensed frequencies.

2. FCC-Supported Action Items:

- (a) Recognize that the growth and pervasiveness of Nextel's SMR traffic was not anticipated by the FCC's current regulatory regime, and that special actions, including rulemaking, will be necessary to unravel this problem. This may include:
 - i) We recommend that a much more aggressive out-of-band emission standard be implemented. In fact, in parallel with this letter, the District will initiate a series of requests for rulemaking proceedings (pertaining to transmission energy, purity, sharpness and management of external effects consistent with public safety, convenience, interest and necessity, and the fair, efficient and equitable distribution of radio services), rather than a request for special relief such as this letter.
 - ii) Another area pertinent to FCC support and rulemaking will be the application of FCC's authority to inspect (and to require any new or additional facts for findings connected with licensing), such that we can implement Item No. 1 above in a coordinated manner.
- (b) Segregate public safety and commercial spectrum assignments, by working with FCC to create wider bands of contiguous frequencies for use by public safety radio. This is not something that the affected parties can do on their own; it will require the support and active participation of the FCC.
- (c) Develop and implement a comprehensive plan for better frequency coordination, designed to assist the District Government as well as surrounding jurisdictions.

**Draft Proposed Action Plan to Correct and Mitigate Interference
Caused by Wireless Carriers to the Public Safety Radio System
of the Government of the District of Columbia**

- (d) Develop a coordinated plan to assign and allocate frequencies that will likely become available in the 700 MHz band, in a manner designed to avoid the sort of noise floor related issues that currently prevail in the 800MHz band.
- 3. Coordination with Other Relevant Agencies:
 - (a) The District plans to engage the NTIA to assist in this matter, to the full extent of their responsibilities under the relevant provisions of their enabling legislation.

